

WHAT IS CLAIMED IS:

- 1 1. An isolated polypeptide, wherein said polypeptide is from about 5
2 to about 71 amino acids in length and comprises a contiguous amino acid sequence
3 DX₁CX₂D; wherein X₁ and X₂ are selected from the group consisting of amino acids.
- 1 2. The isolated polypeptide of claim 1, wherein X₁ is a valine or a
2 conservatively modified variant thereof.
- 1 3. The isolated polypeptide of claim 1, wherein X₂ is a glutamine or a
2 conservatively modified variant thereof.
- 1 4. The isolated polypeptide of claim 1, wherein said polypeptide
2 comprises the contiguous amino acid sequence DVCQD.
- 1 5. The isolated polypeptide of claim 1, wherein said peptide is a
2 peptidomimetic of DX₁CX₂D, wherein X₁ and X₂ are selected from the group consisting
3 of amino acids.
- 1 6. The isolated polypeptide of claim 1, wherein said polypeptide
2 specifically binds to an antibody raised against Saposin B.
- 1 7. The isolated polypeptide of claim 1, wherein said polypeptide
2 comprises an amino acid sequence substantially identical to that shown in SEQ ID NO:1
3 beginning at position 7.
- 1 8. The isolated polypeptide of claim 1, wherein said polypeptide
2 comprises at least 5 contiguous amino acids, or conservatively modified variants thereof,
3 said contiguous amino acids having an amino acid sequence as shown in SEQ ID NO:1,
4 beginning at position 7.
- 1 9. The isolated polypeptide of claim 1, wherein said polypeptide
2 comprises R-DVCQD-R'; wherein R is from 0 to about 6 contiguous amino acids; and
3 wherein R' is from 0 to about 59 contiguous amino acids.
- 1 10. The isolated polypeptide of claim 1 wherein said polypeptide is
2 glycosylated.

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1 11. The isolated polypeptide of claim 1, wherein said polypeptide .
2 comprises R-XDVCQD-R'; wherein R is selected from the group consisting of
3 Aa₁-Aa₂-Aa₃-Aa₄-Aa₅, Aa₂-Aa₃-Aa₄-Aa₅, Aa₃-Aa₄-Aa₅, Aa₄-Aa₅ and Aa₅, and wherein
4 Aa₁, Aa₂, Aa₃, Aa₄ and Aa₅ are selected from the group consisting of amino acids; X is
5 selected from the group consisting of G, A, S and T; and wherein R' is from 0 to about 59
6 contiguous amino acids.

1 12. The isolated polypeptide of claim 11, wherein Aa₁ is a glutamine or
2 a conservative substitution thereof.

1 13. The isolated polypeptide of claim 11, wherein Aa₂ is a proline or a
2 conservative substitution thereof.

1 14. The isolated polypeptide of claim 11, wherein Aa₃ is a lysine or a
2 conservative substitution thereof.

1 15. The isolated polypeptide of claim 11, wherein Aa₄ is an aspartic
2 acid or a conservative substitution thereof.

1 16. The isolated polypeptide of claim 11, wherein Aa₅ is a asparagine
2 or a conservative substitution thereof.

1 17. The isolated polypeptide of claim 11, wherein R' is selected from
2 the group consisting of Aa₁₂-Aa₁₃-Aa₁₄-Aa₁₅-Aa₁₆, Aa₁₂-Aa₁₃-Aa₁₄-Aa₁₅, Aa₁₂-Aa₁₃-Aa₁₄,
3 Aa₁₂-Aa₁₃ and Aa₁₂, wherein Aa₁₂, Aa₁₃, Aa₁₄, Aa₁₅ and Aa₁₆ are selected from the group
4 consisting of amino acids.

1 18. The isolated polypeptide of claim 17, wherein Aa₁₂ is a cysteine or
2 a conservative substitution thereof.

1 19. The isolated polypeptide of claim 17, wherein Aa₁₃ is an isoleucine
2 or a conservative substitution thereof.

1 20. The isolated polypeptide of claim 17 wherein Aa₁₄ is an glutamine
2 or a conservative substitution thereof.

1 21. The isolated polypeptide of claim 17, wherein Aa₁₅ is an
2 methionine or a conservative substitution thereof.

1 22. The isolated polypeptide of claim 17, wherein Aa₁₆ is a valine or a
2 conservative substitution thereof.

1 23. The isolated polypeptide of claim 1, which has the amino acid
2 sequence GDVCQDCIQMV.

1 24. An isolated protein, wherein said protein specifically binds to
2 Saposin B and is found on the surface of cells selected from the group consisting of KS
3 Y-1, SLK and HUVEC.

1 25. The isolated protein of claim 24, wherein said protein is
2 recombinantly expressed.

1 26. An antibody that is specifically reactive with the isolated
2 polypeptide of claim 1.

1 27. The antibody of claim 26, wherein said monoclonal antibody is a
2 monoclonal antibody.

1 28. The antibody of claim 26, wherein said antibody is a single chain
2 antibody.

1 29. A method of treating a mammal, wherein said organism has a
2 pathological condition associated to undesired angiogenesis, by administering an amount
3 of an isolated polypeptide comprising a contiguous amino acid sequence DX₁CX₂D,
4 wherein X₁ and X₂ are selected from the group consisting of amino acids, and said
5 polypeptide has antiangiogenic activity, and wherein said amount of polypeptide is
6 effective to reduce angiogenesis.

1 30. The method of claim 29, wherein the mammal is human.

1 31. The method of claim 29, wherein said pathological condition is
2 cancer.

1 32. The method of claim 31, wherein said cancer is Kaposi's Sarcoma.

1 33. The method of claim 29, wherein administration is selected from
2 the group consisting of subcutaneous, intramuscular, intravenous, intra-arterial,
3 intrabronchial, oral, transdermal, intraocular, rectal, vaginal, intranasal, sublingual and
4 intralesional.

1 34. The method of claim 33, wherein the administration is selected
2 from the group consisting of intralesional and transdermal.

1 35. The method of claim 29, wherein said isolated polypeptide is
2 Saposin B.

1 36. The method of claim 29, wherein said therapeutic amount is from
2 about 0.1 mg/kg to about 20 mg/kg.

1 37. A pharmaceutical composition in unit dosage form, which
2 comprises:

3 (a) one or more pharmaceutically acceptable excipients,

4 (b) an amount of a polypeptide comprising a contiguous amino acid
5 sequence DX_1CX_2D , wherein X_1 and X_2 are selected from the group consisting of amino
6 acids; and

7 wherein the polypeptide is effective to treat or prevent undesired
8 angiogenesis in an animal or patient to whom one or more unit doses of said composition
9 are administered.

1 38. The pharmaceutical composition of claim 37, wherein said unit
2 dosage form is an aseptic solution comprising said polypeptide.

1 39. The pharmaceutical composition of claim 37, wherein said unit
2 dosage form is a topical ointment.

1 40. An isolated fusion protein, said fusion protein comprising a
2 polypeptide of a contiguous amino acid sequence DX_1CX_2D , wherein X_1 and X_2 are

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3 selected from the group consisting of amino acids, and a cell targeting moiety; wherein
4 said cell targeting moiety and said polypeptide have functional activity independent of
5 each other.

1 41. The isolated fusion protein of claim 40, wherein said cell targeting
2 moiety is a protein.

1 42. The isolated fusion protein of claim 40, wherein said protein is an
2 antibody.

1 43. The isolated fusion protein of claim 42, wherein said antibody is a
2 monoclonal antibody.

1 44. The isolated fusion protein of claim 43, wherein said antibody is a
2 single chain Fv antibody.

1 45. An isolated fusion protein, said fusion protein comprising a
2 polypeptide of a contiguous amino acid sequence DX_1CX_2D , wherein X_1 and X_2 are
3 selected from the group consisting of amino acids, and a cytotoxic moiety; wherein said
4 cell targeting moiety and said polypeptide have functional activity independent of each
5 other.

1 46. The isolated fusion protein of claim 45, wherein said cytotoxic
2 moiety is a protein.

1 47. The isolated fusion protein of claim 45, wherein said protein is a
2 bacterial toxin.

1 48. The isolated fusion protein of claim 47, wherein said bacterial
2 toxin is from Diphtheria.

1 49. The isolated fusion protein of claim 48, wherein said bacterial
2 toxin is the B chain of Diphtheria toxin.

1 50. The isolated fusion protein of claim 47, wherein said bacterial
2 toxin is from Pseudomonas.

1 51. The isolated fusion protein of claim 50, wherein said bacterial
2 toxin is Pseudomonas exotoxin.

1 52. The isolated fusion protein of claim 51, wherein said Pseudomonas
2 exotoxin is selected from the group consisting of PE38 and PE40.

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